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IN THE UNITED STATES  
PATENT AND TRADEMARK OFFICE

**PATENT APPLICATION**

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**CASE 5-4-2-17**

**TITLE** Reducing Scintillation Effects for Optical Free-Space  
Transmission

**APPLICATION NUMBER** 09/839,486

**FILING DATE** 04/23/2001

**THE COMMISSIONER FOR PATENTS**

**P. O. BOX 1450**

**ALEXANDRIA VA. 22313-1450**

**RECEIVED**

JUL 15 2004

Technology Center 2100

**SIR:**

**AMENDMENT**

Please cancel claims 14-19.

Please add claims 20 – 32 as follows:

- 1 Claim 20. Apparatus for transmitting a transmission payload data bit-stream
- 2 through an optical free-space medium, said apparatus comprising:
- 3 means for encoding an optical transmission payload data bit-stream
- 4 into codewords using Reed-Solomon encoding;
- 5 means for fragment said codewords into sequences of segments;
- 6 a buffer store comprising SDRAM devices for storing physical pages,
- 7 each said SDRAM device having a cycle rate including a
- 8 READ rate and a WRITE rate, said SDRAM device being both
- 9 readable and writable at said cycle rate, and
- 10 each said SDRAM device matrix of memory cells having a
- 11 defined repeating x-y row-column submatrix, each for containing a
- 12 single one of said physical pages;
- 13 means for interleaving successive blocks of codeword segments into
- 14 successive said x-y submatrices in WRITE operations having a first page-
- 15 change overhead operation;
- 16